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**Fruit and  
Vegetable  
Division**

**Fresh  
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Branch**

# **United States Standards for Grades of Grapefruit (California and Arizona)**

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# **United States Standards for Grades of Grapefruit (California and Arizona) <sup>1</sup>**

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<sup>1</sup>Packing of the product in conformity with the requirements of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act or with applicable State laws and regulations.

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#### **Grades**

##### **§51.925 U.S. Fancy.**

U.S. Fancy shall consist of grapefruit of similar varietal characteristics which are mature, well colored, firm, well formed, of smooth texture for the variety, and fairly thin skinned; free from decay, broken skins which are not healed, hard or dry skins, bruises (except those incident to proper handling and packing), dryness or mushy condition, and from injury caused by sprayburn, fumigation, exanthema, scars, green spots, scale, sunburn, sprouting, dirt or other foreign materials, disease, insects or mechanical or other means. Stems shall be properly clipped. (See §51.932.)

##### **§51.926 U.S. No. 1.**

U.S. No. 1 shall consist of grapefruit of similar varietal characteristics which are mature, fairly well colored, firm, well formed, of fairly smooth texture for the variety, and not excessively thick skinned; free from decay, broken skins which are not healed, hard or dry skins, bruises (except those incident to proper handling and packing), and from damage caused by dryness or mushy condition, sprayburn, fumigation, exanthema, scars, green spots, scale, sunburn, sprouting, dirt or other foreign materials, disease, insects, or mechanical or other means. Stems shall be properly clipped. (See §51.932.)

##### **§51.927 U.S. No. 2.**

U.S. No. 2 shall consist of grapefruit of similar varietal characteristics which are mature, slightly colored, fairly firm, fairly well formed, and not decidedly rough; free from decay, broken skins which are not healed, hard or dry skins, and from serious damage caused by bruises, dryness or mushy condition, sprayburn, fumigation, exanthema, scars, green spots, scale, sunburn, sprouting, dirt or other foreign materials, disease, insects, or mechanical or other means. Stems shall be properly clipped. (See §51.932.)

##### **§51.928 U.S. Combination grade.**

Any lot of grapefruit may be designated "U.S. Combination" when not less than 40 percent, by count, of the fruits in each container meet the requirements of U.S. No. 1 grade and the remainder U.S. No. 2 grade. (See §51.933.)

##### **§51.929 U.S. No. 3.**

U.S. No. 3 shall consist of grapefruit of similar varietal characteristics which are mature, slightly colored, which may be slightly spongy, misshapen, and rough but not seriously lumpy; which are free from decay, broken skins which are not healed, hard or dry skins, and from serious damage caused by bruises, dryness or mushy condition, and from very serious damage caused by sprayburn, fumigation, exanthema, scars, green spots, scale, sunburn, sprouting, dirt or other foreign materials, disease, insects or mechanical or other means. Stems shall be properly clipped. (See §51.932.)

#### **Unclassified**

##### **§51.930 Unclassified.**

Unclassified shall consist of grapefruit which have not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards

but is provided as a designation to show that no definite grade has been applied to the lot.

#### **Tolerances**

##### **§51.931 Tolerances.**

In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the tolerances set forth in §§51.932 and 51.933 are provided as specified.

##### **§51.932 U.S. Fancy, U.S. No. 1, U.S. No. 2 and U.S. No. 3 grades.**

Not more than 10 percent, by count, of the fruit in any lot may fail to meet the requirements of the specified grade, other than for color, but not more than one-twentieth of this amount, or one-half of 1 percent, shall be allowed for decay at shipping point: **Provided**, That an additional tolerance of 2-1/2 percent, or a total of not more than 3 percent, shall be allowed for decay en route or at destination. In addition, not more than 10 percent, by count, of the fruit in any lot may not meet the requirements relating to color.

##### **§51.933 U.S. Combination grade.**

Not more than 10 percent, by count, of the fruit in any lot may fail to meet the requirements of this grade, other than for color, but not more than one-twentieth of this amount, or one-half of 1 percent, shall be allowed for decay at shipping point: **Provided**, That an additional tolerance of 2-1/2 percent, or a total of not more than 3 percent, shall be allowed for decay en route or at destination. This 3 percent tolerance may be used to reduce the percentage of U.S. No. 1 grade required in the combination, provided the affected fruits meet the requirements of U.S. No. 1 grade in other respects. In addition, not more than 10 percent, by count, of the fruit in any lot may not meet the requirements of the U.S. No. 2 grade for color. No part of any tolerance, other than that for decay, shall be allowed to reduce for the lot as a whole the percentage of U.S. No. 1 in the combination, but individual containers may have not more than a total of 10 percent less than the percentage of U. S. No. 1 specified: **Provided**, That the entire lot averages within the percentage specified.

#### **Application of Tolerances**

##### **§51.934 Application of tolerances to individual packages.**

(a) The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations: **Provided**, That the averages for the entire lot are within the tolerances specified for the grade.

(1) For packages which contain more than 25 pounds, and a tolerance of 10 percent or more is provided, individual packages in any lot shall have not more than one and one-half times the tolerance specified. For packages which contain more than 25 pounds and a tolerance of less than 10 percent is provided, individual packages in any lot shall have not more than double the tolerance specified, except that at least one decayed or very seriously damaged fruit may be permitted in any package.

(2) For packages which contain 25 pounds or less, individual packages in any lot are not restricted as to the percentage of defects: **Provided**, That not more than one grapefruit which is seriously damaged by dryness or mushy condition or very seriously damaged by other means may be permitted in any package and, in addition, en route or at destination not more than 10 percent of the packages may have more than one decayed fruit.

#### **Standard Pack**

##### **§51.935 Standard pack.**

- (a) Grapefruit shall be fairly uniform in size, and, when packed in boxes, shall be arranged according to the approved and recognized methods. Each wrapped fruit shall be fairly well wrapped.
- (b) All packages shall be tightly packed and well filled but the contents shall not show excessive or unnecessary bruising because of overfilled packages.
- (c) When packed in standard nailed boxes, grapefruit shall show a minimum bulge of 2 inches, except that grapefruit of a size 80 or smaller need only show a bulge of 1-1/2 inches.
- (d) "Fairly uniform in size" means that not more than 5 percent, by count, of the fruit in any container may be more than one standard size larger or smaller than the standard size for the count packed.
- (e) Example of standard size grapefruit: The standard size grapefruit for a 64 count is that size grapefruit which will pack tightly 64 grapefruit of uniform size when packed according to the approved and recognized method.
- (f) In order to allow for variations, incident to proper packing, not more than 5 percent of the packages in any lot may not meet the requirements of standard pack.

#### **Standards for Export**

##### **§51.936 Standards for export.**

- (a) Not more than a total of 10 percent, by count, of the grapefruit in any container may be soft, affected by decay, damaged by skin breakdown, have broken skins which are not healed, or be seriously damaged by dryness or mushy condition, except that:
  - (1) Not more than one-half of 1 percent shall be allowed for grapefruit affected by decay.
  - (2) Not more than 3 percent shall have broken skins which are not healed.
  - (3) Not more than 5 percent shall be soft.
  - (4) Not more than 5 percent shall be seriously damaged by dryness or mushy condition.
  - (5) Not more than 5 percent shall be damaged by skin breakdown.
- (b) Any lot of grapefruit shall be considered as meeting the standards for export if the entire lot averages within the requirements specified: **Provided**, That no sample from the containers in any lot shall have more than double the percentage specified for any one defect, and that not more than a total of 10 percent, by count, of the grapefruit in any container has any of the defects enumerated in the standards for export.

#### **Definitions**

##### **§51.937 Similar varietal characteristics.**

"Similar varietal characteristics" means that the fruits in any container are similar in color and type.

##### **§51.938 Well colored.**

"Well colored" means that the fruit is yellow in color, with not more than a trace of green.

##### **§51.939 Firm.**

"Firm" means that the fruit is not soft or noticeably wilted or flabby. The skin may feel slightly springy or spongy.

##### **§51.940 Well formed.**

"Well formed" means that the fruit shows the normal shape characteristic of the variety.

##### **§51.941 Smooth.**

"Smooth" means that the skin is of fairly fine grain, the "pebbling" is not pronounced, and any furrows radiating from the stem end are short and shallow.

**§51.942 Fairly thin skinned.**

"Fairly thin skinned" means that the skin thickness does not average more than three-eighths of an inch, on a central cross section, in sizes 100 or smaller, or more than seven-sixteenths of an inch in sizes larger than 100.

**§51.943 Injury.**

"Injury" means any defect which more than slightly affects the appearance, or edible or shipping quality of the fruit. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as injury:

- (a) Sprayburn which changes the color to such an extent that the appearance of the fruit is noticeably injured, or which causes scarring that aggregates more than one-half inch in diameter.
- (b) Fumigation injury which noticeably detracts from the appearance of the fruit, or which occurs as small, thinly scattered spots over more than 10 percent of the fruit surface, or as solid or depressed scarring which aggregates more than one-half of an inch in diameter.
- (c) Exanthema which noticeably detracts from the appearance of the fruit, or which occurs as small, thinly scattered spots over more than 10 percent of the fruit surface, or as solid scarring which aggregates more than one-half of an inch in diameter.
- (d) Scars which are very rough or very deep; or scars which are very dark when more than one-fourth of an inch in diameter.
- (e) Scars which are dark, rough, or deep and aggregate more than one-half of an inch in diameter.
- (f) Scars which are fairly light in color, slightly rough, or of slight depth and aggregate more than 5 percent of the fruit surface.
- (g) Scars which are light colored, fairly smooth, with no depth and aggregate more than 10 percent of the fruit surface.
- (h) Green spots which are depressed or soft, or more than four in number, or which aggregate more than one inch in diameter.
- (i) Scale, when more than 5 medium to large California red or purple scale are adjacent to the "button" at the stem end, or scattered over the fruit, or any scale which affects the appearance of the fruit to a greater extent.
- (j) Sunburn which appreciably changes the normal color or shape of the fruit, or affects more than 10 percent of the fruit surface.

**§51.944 Fairly well colored.**

"Fairly well colored" means that yellow color predominates on the fruit and that the fruit is free from distinctly green streaks and distinctly green blotches.

**§51.945 Fairly smooth.**

"Fairly smooth" means that the skin does not feel noticeably rough or coarse. The size of the fruit should be considered in judging the texture, as large fruit is not usually as smooth as the small. It is common for the fruit to show larger and coarser "pebbling" on the stem end portion than on the blossom end. Slight furrows or grooves which may be present on the stem end portion of the fruit shall not be considered as slightly rough unless they are of sufficient depth, length, and number to materially affect the appearance and smoothness of the grapefruit.

**§51.946 Excessively thick skinned.**

"Excessively thick skinned" means that the skin thickness averages more than seven-sixteenths of

an inch, on a central cross section, in sizes 100 or smaller, or more than one-half of an inch in sizes larger than 100.

**§51.947 Damage.**

"Damage" means any injury which materially affects the appearance, or the edible or shipping quality of the fruit. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:

- (a) Dryness or mushy condition, when affecting all segments more than one-fourth of an inch at the stem end, or the equivalent of this amount by volume, when occurring in other portions of the fruit.
- (b) Sprayburn which changes the color to such an extent that the appearance of the fruit is materially injured, or which causes scarring that aggregates more than three-fourths of an inch in diameter.
- (c) Fumigation injury which materially detracts from the appearance of the fruit, or which occurs as small, thinly scattered spots over more than 25 percent of the fruit surface, or as solid scarring or depressions which aggregate more than three-fourths of an inch in diameter.
- (d) Exanthema which materially detracts from the appearance of the fruit, or which occurs as small, thinly scattered spots over more than 25 percent of the fruit surface, or as solid scarring, that is not cracked, which aggregates more than three-fourths of an inch in diameter.
- (e) Scars which are very deep; or scars which are very rough or very dark and aggregate more than one-half of an inch in diameter.
- (f) Scars which are dark, rough or deep and aggregate more than three-fourths of an inch in diameter.
- (g) Scars which are fairly light in color, slightly rough, or of slight depth and aggregate more than 10 percent of the fruit surface.
- (h) Scars which are light colored, fairly smooth, with no depth and aggregate more than 15 percent of the fruit surface.
- (i) Green spots which are depressed or soft, or more than seven in number, or which aggregate more than 5 percent of the fruit surface.
- (j) Scale, when more than 10 medium to large California red or purple scale are adjacent to the "button" at the stem end, or scattered over the fruit, or any scale which affects the appearance of the fruit to a greater extent.
- (k) Sunburn which causes appreciable flattening of the fruit, drying or darkening of the skin, or affects more than 25 percent of the fruit surface.

**§51.948 Slightly colored.**

"Slightly colored" means that sufficient yellow color is distributed over the fruit surface and, when blended with the green color present, is equivalent to 25 percent of full yellow color characteristic of the variety.

**§51.949 Fairly firm.**

"Fairly firm" means that the fruit may be slightly soft but is not decidedly flabby. The skin may be thick and slightly puffy.

**§51.950 Fairly well formed.**

"Fairly well formed" means that the fruit is not materially flattened, materially pointed, extremely

elongated, or otherwise decidedly deformed.

**§51.951 Decidedly rough.**

"Decidedly rough" means that the skin is materially rough, materially lumpy, decidedly folded, or decidedly ridged.

**§51.952 Serious damage.**

"Serious damage" means any injury which seriously affects the appearance, or the edible or shipping quality of the fruit. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as serious damage:

- (a) Dryness or mushy condition, when affecting all segments more than one-half of an inch at the stem end, or the equivalent of this amount by volume, when occurring in other portions of the fruit.
- (b) Sprayburn which changes the color to such an extent that the appearance of the fruit is seriously injured, or which causes scarring that aggregates more than 10 percent of the fruit surface.
- (c) Fumigation injury which occurs as small, thinly scattered spots over more than one-half of the fruit surface, or solid scarring or depressions which aggregate more than 5 percent of the fruit surface.
- (d) Exanthema which occurs as small, thinly scattered spots over more than one-half of the fruit surface, or solid scarring that is not cracked, which aggregates more than 5 percent of the fruit surface.
- (e) Scars which are very deep; or scars which are very rough or very dark and aggregate more than one inch in diameter.
- (f) Scars which are dark, rough or deep and aggregate more than 5 percent of the fruit surface.
- (g) Scars which are fairly light in color, slightly rough or of slight depth and aggregate more than 15 percent of the fruit surface.
- (h) Scars which are light colored, fairly smooth, with no depth and aggregate more than 25 percent of the fruit surface.
- (i) Green spots which are soft or aggregate more than 2 inches in diameter.
- (j) Scale, when California red or purple scale is concentrated as a ring or blotch, or which is more than thinly scattered over the fruit surface, or any scale which affects the appearance of the fruit to a greater extent.
- (k) Sunburn which causes decided flattening of the fruit, drying or dark discoloration of the skin, or which affects more than one-third of the fruit surface.

**§51.953 Slightly spongy.**

"Slightly spongy" means that the fruit is puffy or slightly wilted but not decidedly flabby.

**§51.954 Misshapen.**

"Misshapen" means that the fruit is materially flattened, materially pointed, extremely elongated or otherwise decidedly deformed.

**§51.955 Very serious damage.**

"Very serious damage" means any injury which very seriously affects the appearance, or the edible or shipping quality of the fruit. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as



very serious damage:

- (a) Sprayburn which seriously affects more than 25 percent of the fruit surface.
- (b) Fumigation injury which causes deep, rough, or dark scarring which aggregates more than 25 percent of the fruit surface.
- (c) Exanthema which aggregates more than 10 percent of the fruit surface, or causes serious cracks.
- (d) Scars which are very dark, very rough, or very deep and aggregate more than 10 percent of the fruit surface.
- (e) Scars which are dark, rough or deep and aggregate more than 25 percent of the fruit surface.
- (f) Green spots which are badly sunken or soft.
- (g) Scale so numerous or large that the appearance of the fruit is very seriously affected.
- (h) Sunburn which seriously affects more than one-third of the fruit surface.